

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

David L. Briesse

Serial No. 10/072,233

Filed: 2/7/02

For: SHEAR FRAGMENTING BULLET

Group Art Unit 3641

Examiner James S. Bergin

Docket No. 19545

DECLARATION OF THOMAS WANDISHIN

Commissioner of Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

THOMAS WANDISHIN declares that:

(1) He is President of Manufacturing Technologies, Inc. [MTI], a corporation of Montana having a place of business at 3570 Highway 287, Sheridan, Montana 59749.

(2) He is a 1957 graduate of Bethlehem High School, Bethlehem, Pennsylvania, and continued his education at Northampton Area Community College, Bethlehem, Pennsylvania, where he took courses in mathematics and engineering graphics. He took further course work in cost control and project management at Dana Corporation in Bozman, Montana, and courses in CNC programming at Hasbach Company in California.

(3) Following his graduation from high school, he worked as machine and tool maker for Bethlehem Apparatus, of Hellertown, Pennsylvania, in the field of scientific glass blowing and working, which included the use and manufacture of glass working tools and equipment. He then worked in the Central Tool Department of Bethlehem Steel Corporation, of Bethlehem, Pennsylvania, and subsequently as an engineering technician for the IT&T Electron Tube Laboratory in Easton, Pennsylvania.

In 1969, he joined Montana State University, working in the University's Instrument Service Department in the field of scientific glass blowing. In 1970, he started his own company, Valley Machine & Engineering, at Belgrade, Montana, and in 1977, he was employed as a mechanical engineer by the Dana Corporation. In 1984, after Dana was bought out by Allen Bradley, he went with AMP Corporation in Phoenix, Arizona, where he was employed as a manager. In 1989, he returned to Montana to start Manufacturing Technologies, Inc.

(4) While growing up as a boy, he was active with the use of a rifle in target shooting and hunting. During the period of 1957 and 1962, while serving in the Marine Corps Reserves, he shot competitively, and represented the Fourth Naval District in rifle and pistol competition in the Eastern District Championship match in North Carolina. In the early 1970's, he served in the field of law enforcement as the Assistant Chief of Police for the city of Belgrade, Montana, where he again engaged in competitive target shooting. He is quite familiar with various types of firearms used in the fields of law enforcement, hunting, and target shooting, together with the types of bullets used thereby.

(5) The company which he founded, Manufacturing Technologies, Inc., [Exhibit No. 1] is engaged in new product development; patent searching, analysis and consultation for new products; precision machining, contract manufacturing, marketing and sales; and product development, life cycling, costing, and pricing. It has a manufacturing and

engineering facility of about 2048 square feet in Sheridan, Montana. It develops products in the field of sporting goods, including hunting and fishing products..

(6) In early January, 2004, he was requested by Mr. David L. Brieze to conduct comparative testing on several low-penetration types of bullets that were provided by Mr. Brieze. Mr. Brieze presented him with samples of:

- (a) the shear fragmentation bullet [Exhibit No. 2] disclosed in the subject David Brieze U. S. patent application Serial No. 10/072,233 ;
- (b) the "highly separable bullet" of Torrey L. Brieze [Exhibit No. 3], which is disclosed in U. S. patent No. 5,528,989 ; and
- (c) the hollow point 22 caliber .224 inch diameter 53 Grain Match Grade premium bullet [Exhibit No. 4] of Hornady Manufacturing Co.

The Hornady Match Grade bullets [Exhibit No. 5] came from a Hornady carton [Exhibit No. 6]. He was familiar with this hollow-tip bullet, noting the lacerations on the tip which make linear slots in the bullet. He was advised by Mr. David Brieze that the Torrey Brieze bullets had previously been obtained by Mr. David Brieze at a trade show. He was also previously familiar with this bullet.

Thus, the three bullet samples were comparable 22 caliber 53 grain fragmentation bullets of a type with which he was familiar.

(7) The three types of bullet samples [Exhibit No. 7] were hand loaded with 31 grains of IMR 4895 brand of powder. All bullets had identical Remington brass casings, and CCI large rifle primers. This powder charge normally produces with a 53 grain bullet a velocity of about 3,728 feet per second.

(8) He then tested the three bullet samples under the following controlled conditions. First, a quantity of ballistic gelatin was mixed 10% by volume with water, and the mixture

was formed into a plurality of identical cylindrical blocks each having a diameter of 6", and a length of 7-3/4". The blocks were refrigerated at 50 degrees F.

(9) The bullets were then fired into the gelatin block targets by the same Sako 22-250 caliber rifle, at a distance of 35 feet between the muzzle of the rifle and the face of the gelatin block target. The blocks were put on a light table and were photographed, with the rulers showing the depth of penetration of the bullets. The blocks were then cut longitudinally to show the wound cavity, and were photographed. These blocks were then melted down, one at a time, to recover the bullet fragments.

(10) The photographs of Exhibits Nos. 8, 9, and 10 illustrate the explosion patterns in the gelatin blocks of the David Brieze bullet of the present invention, the Torrey Brieze bullet, and the Hornady bullet, respectively. As shown in Exhibit No. 8, the David Brieze bullet began to fragment immediately upon impact with the gelatin block, and had a depth of penetration of about 6-3/4". The Torrey Brieze bullet [Exhibit No. 9] and the Hornady bullet [Exhibit No. 10] each entered the gelatin blocks approximately 3/4 of an inch before beginning to fragment. The Torrey Brieze bullet had a depth of penetration of about 7-1/4", and the Hornady bullet went completely through the 7-3/4" gelatin block and into the second gelatin block.

(11) Exhibit Nos. 11 and 12 illustrate in longitudinal section the wound cavity of the David Brieze bullet. This wound cavity is denser and more concentrated than those of the Torrey Brieze bullet [Exhibit 13] or the Hornady bullet [Exhibit No. 14], in each of which larger particles of lead penetrated the gelatin block, as shown. It should be noted that in the photographs of Exhibit Nos. 11 - 14, the larger particles toward the end of the wound cavity were proven -- upon melting down of the gelatin blocks -- to be pieces of the copper

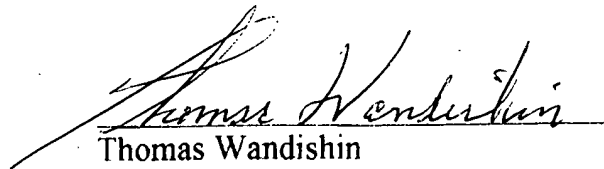
cartridge jacket, and not lead. It was found that the David Brieze bullet had smaller, finer, more uniform particles of lead than the Torrey Brieze and Hornady bullets.

(12) As a consequence of the tests, he concluded that the David Brieze Shear Fragmenting Bullet had less penetration, quicker impact fragmentation, and a more dense wound cavity than either the Torrey Brieze or the Hornady bullets. He believes that the David Brieze bullet would have particular utility in such low-penetration situations as (a) use by an air marshal (when low penetration is desired to avoid damage to an airplane or other airplane passengers), (b) by a law enforcement officer during a hostage taking situation (to avoid injury to a hostage being held by a criminal), (c) and when hunting varmints and the like. In his opinion, the David Brieze bullet was a definite improvement over the Hornady and Torrey Brieze bullets.

Further declarant saith not.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Feb 20, 2004


Thomas Wandishin
President
Manufacturing Technologies, Inc.